WHAT IS CLAIMED IS:

1. A method for at least one of detecting, quantifying, staging, reporting, or tracking of a disease, said method comprising:

providing analysis software configured to at least one of detect, quantify, stage, report, or track a disease utilizing images of a patient, said analysis software executable on a personal computer of a patient;

imaging the patient with a medical imaging apparatus;

downloading medical images of the patient produced by the imaging apparatus to the personal computer of the patient; and

repeating said imaging and downloading a plurality of times at intervals selected to provide said analysis software with sufficient images to at least one of detect, quantify, stage, report, or track the disease in the patient.

2. A method in accordance with Claim 1 wherein said imaging apparatus is a computed tomographic imaging apparatus.

3. A method in accordance with Claim 1 wherein said imaging apparatus is a magnetic resonance imaging apparatus.

4. A method in accordance with Claim 1 wherein said imaging apparatus is an x-ray imaging apparatus.

5. A method in accordance with Claim 1 wherein the disease is chronic obstructive pulmonary disease, and said analysis software is configured to analyze tubular structures depicted in the medical images.

6. A method in accordance with Claim 5 wherein the disease is selected from the group consisting of chronic bronchitis and asthma.

7. A method in accordance with Claim 5 wherein said analysis software is configured to analyze bronchial wall cross-sectional area in the medical images.

8. A method in accordance with Claim 5 wherein said analysis software is configured to utilize segmentation to isolate a selected tubular structure of interest in the medical images.

9. A method in accordance with Claim 8 wherein said analysis software is configured to measure bronchial wall cross-sectional area utilizing said isolated selected tubular structure of interest.

10. A method in accordance with Claim 5 wherein said analysis software is further configured to identify a center of an airway lumen in the medical images.

11. A method in accordance with Claim 10 wherein said analysis software is configured to measure bronchial wall cross-sectional area utilizing said identified center of an airway lumen in the medical images.

12. A method in accordance with Claim 1 wherein the disease is chronic obstructive pulmonary disease, and said analysis software is configured to analyze areas of a lung infected with the disease in the medical images.

13. A method in accordance with Claim 12 wherein the disease is emphysema.

14. A method in accordance with Claim 12 wherein said analysis software is configured to divide an image of a lung into a series of regions to be analyzed.

15. A method in accordance with Claim 1 wherein the disease is chronic obstructive pulmonary disease, and said analysis software is configured to analyze properties of regions of a lung in the medical images.

16. A method in accordance with Claim 1 wherein the disease is chronic obstructive pulmonary disease and said analysis software is configured to analyze region edges in a lung in the medical images.

17. A method in accordance with Claim 1 wherein said analysis software is configured to analyze airway segmentation and perform multiple hypothesis tracking.

18. A method in accordance with Claim 17 wherein said analysis software is configured to analyze a bronchial tree and to use multiple hypothesis tracking to piece a bronchial tree together from cross-sectional images.

19. A network for at least one of detecting, quantifying, staging, reporting, or tracking of a disease, said network comprising:

analysis software executable on personal computers of patients, said software including instructions configured to instruct the personal computer to at least one of detect, quantify, stage, report, or track a disease utilizing images of a patient;

at least one imaging apparatus configured to produce medical images of patients; and

an interface for transferring scanned images of a patient to a personal computer of the imaged patient.

20. A network in accordance with Claim 19 further comprising a remote database, and wherein said analysis software is configured to instruct a personal computer to transmit information relating to status of a patient's disease to said remote database.

21. A network in accordance with Claim 20 wherein said database is maintained by a pharmaceutical company.

22. A network in accordance with Claim 20 wherein said analysis software is configured to transmit information relating to the status of a patient's disease in accordance with a universal scale.

23. A network in accordance with Claim 19 wherein said imaging apparatus is a computed tomographic imaging apparatus.

24. A network in accordance with Claim 19 wherein said imaging apparatus is a magnetic resonance imaging apparatus.

25. A network in accordance with Claim 19 wherein said imaging apparatus is an x-ray imaging apparatus.

26. A network in accordance with Claim 19 wherein the disease is chronic obstructive pulmonary disease, and said analysis software is configured to analyze tubular structures depicted in the medical images.

27. A network in accordance with Claim 26 wherein the disease is selected from the group consisting of chronic bronchitis and asthma.

28. A network in accordance with Claim 26 wherein said analysis software is configured to analyze bronchial wall cross-sectional area in the medical images.

29. A network in accordance with Claim 26 wherein said analysis software is configured to utilize segmentation to isolate a selected tubular structure of interest in the medical images.

30. A network in accordance with Claim 29 wherein said analysis software is configured to measure bronchial wall cross-sectional area utilizing said isolated selected tubular structure of interest.

31. A network in accordance with Claim 26 wherein said analysis software is further configured to identify a center of an airway lumen in the medical images.

32. A network in accordance with Claim 31 wherein said analysis software is configured to measure bronchial wall cross-sectional area utilizing said identified center of an airway lumen in the medical images.

33. A network in accordance with Claim 19 wherein the disease is chronic obstructive pulmonary disease, and said analysis software is configured to analyze areas of a lung infected with the disease in the medical images.

34. A network in accordance with Claim 33 wherein the disease is emphysema.

35. A network in accordance with Claim 33 wherein said analysis software is configured to divide an image of a lung into a series of regions to be analyzed.

36. A network in accordance with Claim 19 wherein the disease is chronic obstructive pulmonary disease, and said analysis software is configured to analyze properties of regions of a lung in the medical images.

37. A network in accordance with Claim 19 wherein the disease is chronic obstructive pulmonary disease and said analysis software is configured to analyze region edges in a lung in the medical images.

38. A network in accordance with Claim 19 wherein said analysis software is configured to analyze airway segmentation and perform multiple hypothesis tracking.

39. A network in accordance with Claim 38 wherein said analysis software is configured to analyze a bronchial tree and to use multiple hypothesis tracking to piece a bronchial tree together from cross-sectional images.

40. A portable computing device configured to:

download medical images of a patient produced by an imaging apparatus to the portable computing device;

analyze said downloaded medical images to at least one of detect, quantify, stage, report, or track a disease in the patient and report analysis results to the patient; and

transmit results of said analysis to a remote database.

41. A portable computing device in accordance with Claim 40, wherein to transmit results of said analysis to a remote database, said portable computing device is configured to transmit information relating to the status of a patient's disease in accordance with a universal scale.

42. A portable computing device in accordance with Claim 40 configured to download said medical images from a computed tomographic imaging apparatus.

43. A portable computing device in accordance with Claim 40 configured to download said medical images from a magnetic resonance imaging apparatus.

44. A portable computing device in accordance with Claim 40 configured to download said medical images from an x-ray imaging apparatus.

45. A portable computing device in accordance with Claim 40 wherein the disease is chronic obstructive pulmonary disease, and said portable computing device is configured to analyze tubular structures depicted in the medical images.

46. A portable computing device in accordance with Claim 45 configured to analyze bronchial wall cross-sectional area in the medical images.

47. A portable computing device in accordance with Claim 45 configured to utilize segmentation to isolate a selected tubular structure of interest in the medical images.

48. A portable computing device in accordance with Claim 45 further configured to identify a center of an airway lumen in the medical images.

49. A portable computing device in accordance with Claim 40 wherein the disease is chronic obstructive pulmonary disease, and said portable computing device is configured to analyze regions of a lung infected with the disease in the medical images.

50. A portable computing device in accordance with Claim 40 wherein the disease is chronic obstructive pulmonary disease, and said portable computing device is configured to analyze intensity of regions of a lung in the medical images.

51. A portable computing device in accordance with Claim 40 wherein the disease is chronic obstructive pulmonary disease and said portable computing device is configured to analyze region edges in a lung in the medical images.

52. A portable computing device in accordance with Claim 40 configured to analyze airway segmentation and perform multiple hypothesis tracking.

53. A method for performing a drug treatment trial comprising:

providing analysis software configured to at least one of detect, quantify, stage, report, or track a disease utilizing images of a patient, said analysis software executable on personal computers of a plurality of patients;

imaging the patients with medical imaging apparatus to produce medical images of the patients;

downloading the medical images of each imaged patient to the personal computer of the imaged patient;

repeating said imaging and downloading a plurality of times at intervals selected to provide said analysis software with sufficient images to at least one of detect, quantify, stage, report, or track the disease in each patient;

analyzing said medical images utilizing the personal computers of each patient to at least one of detect, quantify, stage, report, or track a disease in the patient; and

uploading results of the analysis from each patient's personal computer to a database for further analysis and evaluation.

54. A method for tracking a changeable parameter of one or both of a person or object in a population of such persons or objects, said method comprising:

providing analysis software configured to track said at least one changeable parameter utilizing images of the person or object, said analysis software executable on a personal computer in the possession of the person or in the possession of a person possessing the object;

imaging the person or the object with an imaging apparatus;

downloading images of the person or object produced by the imaging apparatus to the personal computer; and

repeating said imaging and downloading a plurality of times at intervals selected to provide said analysis software with sufficient images to track said at least one changeable parameter.

55. A method in accordance with Claim 54 carried out on a plurality of persons or objects, utilizing a separate personal computer for each person or object.

56. A method in accordance with Claim 55 further comprising aggregating said changeable physical parameters in a remote database.

57. A method for at least one of detecting, quantifying, staging, reporting, or tracking of a disease, said method comprising:

providing analysis software configured to at least one of detect, quantify, stage, report, or track a disease utilizing images of a patient;

imaging the patient with a medical imaging apparatus;

downloading medical images of the patient produced by the imaging apparatus to a computer; and

repeating said imaging and downloading a plurality of times at intervals selected to provide said analysis software with sufficient images to at least one of detect, quantify, stage, report, or track the disease in the patient.

58. A method in accordance with Claim 57 wherein said computer on a network is a computer at a hospital or in a physician's office or workplace.

59. A method in accordance with Claim 57 wherein said imaging apparatus is a computed tomographic imaging apparatus.

60. A method in accordance with Claim 57 wherein said imaging apparatus is a magnetic resonance imaging apparatus.

61. A method in accordance with Claim 57 wherein said imaging apparatus is an x-ray imaging apparatus.

62. A method in accordance with Claim 57 wherein the disease is chronic obstructive pulmonary disease, and said analysis software is configured to analyze tubular structures depicted in the medical images.

63. A method in accordance with Claim 62 wherein the disease is selected from the group consisting of chronic bronchitis and asthma.

64. A method in accordance with Claim 62 wherein said analysis software is configured to analyze bronchial wall cross-sectional area in the medical images.

65. A method in accordance with Claim 62 wherein said analysis software is configured to utilize segmentation to isolate a selected tubular structure of interest in the medical images.

66. A method in accordance with Claim 65 wherein said analysis software is configured to measure bronchial wall cross-sectional area utilizing said isolated selected tubular structure of interest.

67. A method in accordance with Claim 62 wherein said analysis software is further configured to identify a center of an airway lumen in the medical images.

68. A method in accordance with Claim 67 wherein said analysis software is configured to measure bronchial wall cross-sectional area utilizing said identified center of an airway lumen in the medical images.

69. A method in accordance with Claim 57 wherein the disease is chronic obstructive pulmonary disease, and said analysis software is configured to analyze areas of a lung infected with the disease in the medical images.

70. A method in accordance with Claim 69 wherein the disease is emphysema.

71. A method in accordance with Claim 69 wherein said analysis software is configured to divide an image of a lung into a series of regions to be analyzed.

72. A method in accordance with Claim 57 wherein the disease is chronic obstructive pulmonary disease, and said analysis software is configured to analyze properties of regions of a lung in the medical images.

73. A method in accordance with Claim 57 wherein the disease is chronic obstructive pulmonary disease and said analysis software is configured to analyze region edges in a lung in the medical images.

74. A method in accordance with Claim 57 wherein said analysis software is configured to analyze airway segmentation and perform multiple hypothesis tracking.

75. A method in accordance with Claim 74 wherein said analysis software is configured to analyze a bronchial tree and to use multiple hypothesis tracking to piece a bronchial tree together from cross-sectional images.

76. A network for at least one of detecting, quantifying, staging, reporting, or tracking of a disease, said network comprising:

analysis software executable on a computer, said software including instructions configured to instruct the computer to at least one of detect, quantify, stage, report, or track a disease utilizing images of a patient;

at least one imaging apparatus configured to produce medical images of patients; and

an interface for transferring scanned images of a patient to the computer.

77. A network in accordance with Claim 76 further comprising a remote database, and wherein said analysis software is configured to instruct a computer to transmit information relating to status of a patient's disease to said remote database.

78. A network in accordance with Claim 76 wherein said computer is a computer at a hospital or in a physician's office or workplace.

79. A network in accordance with Claim 77 wherein said database is maintained by a pharmaceutical company.

80. A network in accordance with Claim 77 wherein said analysis software is configured to transmit information relating to the status of a patient's disease in accordance with a universal scale.

81. A network in accordance with Claim 76 wherein said imaging apparatus is a computed tomographic imaging apparatus.

82. A network in accordance with Claim 76 wherein said imaging apparatus is a magnetic resonance imaging apparatus.

83. A network in accordance with Claim 76 wherein said imaging apparatus is an x-ray imaging apparatus.

84. A network in accordance with Claim 76 wherein the disease is chronic obstructive pulmonary disease, and said analysis software is configured to analyze tubular structures depicted in the medical images.

85. A network in accordance with Claim 84 wherein the disease is selected from the group consisting of chronic bronchitis and asthma.

86. A network in accordance with Claim 84 wherein said analysis software is configured to analyze bronchial wall cross-sectional area in the medical images.

87. A network in accordance with Claim 84 wherein said analysis software is configured to utilize segmentation to isolate a selected tubular structure of interest in the medical images.

88. A network in accordance with Claim 87 wherein said analysis software is configured to measure bronchial wall cross-sectional area utilizing said isolated selected tubular structure of interest.

89. A network in accordance with Claim 84 wherein said analysis software is further configured to identify a center of an airway lumen in the medical images.

90. A network in accordance with Claim 89 wherein said analysis software is configured to measure bronchial wall cross-sectional area utilizing said identified center of an airway lumen in the medical images.

91. A network in accordance with Claim 76 wherein the disease is chronic obstructive pulmonary disease, and said analysis software is configured to analyze areas of a lung infected with the disease in the medical images.

92. A network in accordance with Claim 91 wherein the disease is emphysema.

93. A network in accordance with Claim 91 wherein said analysis software is configured to divide an image of a lung into a series of regions to be analyzed.

94. A network in accordance with Claim 84 wherein the disease is chronic obstructive pulmonary disease, and said analysis software is configured to analyze properties of regions of a lung in the medical images.

95. A network in accordance with Claim 84 wherein the disease is chronic obstructive pulmonary disease and said analysis software is configured to analyze region edges in a lung in the medical images.

96. A network in accordance with Claim 84 wherein said analysis software is configured to analyze airway segmentation and perform multiple hypothesis tracking.

97. A network in accordance with Claim 96 wherein said analysis software is configured to analyze a bronchial tree and to use multiple hypothesis tracking to piece a bronchial tree together from cross-sectional images.

98. A method for performing a drug treatment trial comprising:

providing analysis software configured to at least one of detect, quantify, stage, report, or track a disease utilizing images of a patient, said analysis software executable a computer;

imaging the patients with medical imaging apparatus to produce medical images of the patients;

downloading the medical images of each imaged patient to the computer;

repeating said imaging and downloading a plurality of times at intervals selected to provide said analysis software with sufficient images to at least one of detect, quantify, stage, report, or track the disease in each patient;

analyzing said medical images utilizing the computer to at least one of detect, quantify, stage, report, or track a disease in the patient; and

uploading results of the analysis from the computer to a database for further analysis and evaluation.